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PATENT
Docket No. 404332000200

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Tina Hall

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In the application of:

Kent L. GILSON

Serial No.: 09/747,602

Filing Date: December 22, 2000

For: VIVA

Examiner: To Be Assigned

Group Art Unit: 2641

PRELIMINARY AMENDMENT

Assistant Commissioner for Patents
Washington, D.C. 20231

Dear Sir:

Prior to examination on the merits, Applicant respectfully requests entry of this Preliminary Amendment for the above-identified application.

IN THE SPECIFICATION

Please replace **lines 4-14, page 47** of the specification with the following replacement paragraph:

The illustrative block diagram drawings of **Figures L11-L14** together with a reference to **Figure D3** shall be used to explain how the propagate transport process can be used to drive parameterized selective symbol substitution in accordance with a presently preferred embodiment of the invention. In other words, an explanation is provided for of the contribution

by the propagate constants process to the resolution of a parameterized polymorphic object into an explicit object. **Figures L11-L14**, illustrate the combined operation of the propagate data sets process and the flatten process in reducing a variant polymorphic behavior object into its atomic elements. Once an object has been reduced to its atomic elements, then according to the propagate constants atomic object resolution rules, the atomic objects will be resolved in accordance with their atomic operations as explained in **Figures L1-L13**.

Please replace **lines 4-17, page 48** of the specification with the following replacement paragraph:

Referring to **Figure L11**, there is shown the variant compare object of **Figure D3**. As explained in another part of this disclosure, the variant compare object 250 is part of the control portion 280 of a parameterized polymorphic ADD behavior object 230. Information rate is the parameter controlling the selective synthesis of the ADD behavior object 230. The compare object 250 in **Figures D3 and L11** has variant type input nodes A and B and has three bit-type output nodes A=B, A>B and A<B as shown. The variant type compare object in **Figure L11** is a top-level compare object. It references a next level variant type behavior compare object 250' illustrated in **Figure L12**. The variant compare behavior object 250' includes two instances of top-level compare object 250, two variant type data set exposer objects 720 and three multiplexer behavior objects 722, 724 and 726 connected as shown. The top-level compare object 250 also references atomic level add object 250', four instances of which are shown in **Figure L14**. The compare behavior of the variant compare object will be understood by those skilled in the art from the descriptions in this and other section of this disclosure and shall not be explained further.

Please replace **lines 1-6, page 49** of the specification with the following replacement paragraph:

Referring to **Figures L11-L14**, the propagate data sets and flatten processes first resolve object 250 shown in **Figure L11** into object 250' shown in **Figure L12**. Next, the propagate data sets and flatten processes resolve the object 250' shown in **Figure L12** into object 250-1 shown in **Figure L13**. Finally, the propagate data sets and flatten processes resolve object 250-1 shown in **Figure L13** into object 250-2 shown in **Figure L14**. Object 250-2 includes four instances of the atomic level compare object 250".

Please replace **lines 8-23, page 55** of the specification with the following replacement paragraph:

Referring to **Figures L11-L14**, assume that respective output transport objects are connected to the respective input A and B nodes of object 250. Moreover, assume that each respective transport object corresponds to transport object 782 of **Figure N2** and is part of respective descending hierarchy of collector objects identical to those that in **Figure N2**, but with different constant values applied to the input nodes of the collector objects. (That is assume that source object in essence is in the position akin to that of either source node 264 or 266 of **Figure D3**.) Continuing with the example, it will be appreciated that the 4-bit type data sets will be propagated to the input nodes A and B of object 250 of **Figure L11**, resulting in the resolution of the object 250 in **Figure L11** into the object 250-2 of **Figure L14** according to the processing described above.

At the end of the processing in **Figures L11-L14**, a respective descending hierarchy like that in **Figure N2** will be connected to each of the two exposer objects 720 in **Figure L13**. Note the symmetry between the descending hierarchy of collector objects in **Figure N2** and the ascending hierarchy of exposer objects in **Figure L13**. They are symmetrical data structures.

Please replace **lines 2-9, page 56** of the specification with the following replacement paragraph:

In the event that the input nodes of the collector objects are connected to constant values, the process can result in the removal of all collector and exposer objects leaving only constant values connected to transport objects. It will be appreciated that this process can be used to connect constant values on nodes 264 and 266 of **Figure D3** to the input nodes of the atomic objects 250" of **Figure L14**. Note that consistent with the operation of the remove exposers and collectors process, the exposers shown in **Figure L13** are removed in **Figure L14**, and constant values A0A1A2A3 and B0B1B2B3 are applied directly to the input nodes of the atomic operators.

IN THE DRAWINGS

The informal drawings submitted with the application have two Figures L10; the second Figure L10 inadvertently being numbered L10 instead of L11. Therefore, the formal drawings submitted herewith, which are also being submitted to the official draftsperson at the Patent Office, have been corrected to show the second Figure L10 as Figure L11, and all figures following in the L series are renumbered as follows: Figure L11 is now Figure L12, Figure L12 is now Figure L13, and Figure L13 is now Figure L14.

Another change to the informal drawings includes a minor correction to Figure G2. In Figure G2 the "Variant" object has two input nodes and one output node, however, it should be showing one input node and two output nodes (left to right side), respectively.

SUBMISSION OF NEW FORMAL DRAWINGS

Applicant submits herewith a set of formal drawings incorporating all of the changes mentioned above.

REMARKS

Attached hereto is a marked-up version of the changes made to the specification and claims by the current amendment. The attached page is captioned "**Version With Markings to Show Changes Made**".

Applicant respectfully submits that the following amendments are fully supported by the specification and drawings as originally filed and do not constitute new matter. Applicant respectfully requests consideration, allowance and passage to issue of the application as amended.

Applicant submits herewith a set of formal drawings incorporating the following changes:

Figure G2 had a "Variant" object showing two input nodes and one output node, however, it should now show one input node and two output nodes.

Figures L11-L14 were erroneously numbered Figures L10-13, however, it should now read wherever applicable, Figure L11, Figure L12, Figure L13 and Figure L14.

Applicant submits certain changes to the wording of the specification to reflect the above changes to the drawings.

The changes to the drawings and to the specification do not add new matter nor change the scope of the invention.

In the unlikely event that the transmittal letter is separated from this document and the Patent Office determines that other relief is required, applicant petitions for any required relief including extensions of time and authorizes the Assistant Commissioner to charge the cost of such petitions and/or other fees due in connection with the filing of this document to **Deposit Account No. 03-1952** referencing Docket No. **404332000200**. However, the Assistant Commissioner is not authorized to charge the cost of the issue fee to the Deposit Account.

Respectfully submitted,

Dated: July 3, 2002 By: _____

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Version With Markings to Show Changes Made

IN THE SPECIFICATION

Please make the following changes to **lines 4-14, page 47** of the specification:

The illustrative block diagram drawings of **Figures [L10-L13] L11-L14** together with a reference to **Figure D3** shall be used to explain how the propagate transport process can be used to drive parameterized selective symbol substitution in accordance with a presently preferred embodiment of the invention. In other words, an explanation is provided for of the contribution by the propagate constants process to the resolution of a parameterized polymorphic object into an explicit object. **Figures [L10-L13] L11-L14**, illustrate the combined operation of the propagate data sets process and the flatten process in reducing a variant polymorphic behavior object into its atomic elements. Once an object has been reduced to its atomic elements, then according to the propagate constants atomic object resolution rules, the atomic objects will be resolved in accordance with their atomic operations as explained in **Figures [L1-L12] L1-L13**.

Please make the following changes to **lines 4-17, page 48** of the specification:

Referring to **Figure [L10] L11**, there is shown the variant compare object of **Figure D3**. As explained in another part of this disclosure, the variant compare object 250 is part of the control portion 280 of a parameterized polymorphic ADD behavior object 230. Information rate is the parameter controlling the selective synthesis of the ADD behavior object 230. The compare object 250 in **Figures D3 and [L10] L11** has variant type input nodes A and B and has three bit-type output nodes A=B, A>B and A<B as shown. The variant type compare object in **Figure [L10] L11** is a top-level compare object. It references a next level variant type behavior compare object 250' illustrated in **Figure [L11] L12**. The variant compare behavior object 250' includes two instances of top-level compare object 250, two variant type data set exposer objects 720 and three multiplexer behavior objects 722, 724 and 726 connected as shown. The top-level compare object 250 also references atomic level add object 250', four instances of which are shown in **Figure [L13] L14**. The compare behavior of the variant compare object will be

understood by those skilled in the art from the descriptions in this and other section of this disclosure and shall not be explained further.

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At the end of the processing in **Figures [L10-L13] L11-L14**, a respective descending hierarchy like that in **Figure N2** will be connected to each of the two exposer objects 720 in **Figure [L12] L13**. Note the symmetry between the descending hierarchy of collector objects in **Figure N2** and the ascending hierarchy of exposer objects in **Figure [L12] L13**. They are symmetrical data structures.

Please make the following changes to **lines 2-9, page 56** of the specification:

In the event that the input nodes of the collector objects are connected to constant values, the process can result in the removal of all collector and exposer objects leaving only constant values connected to transport objects. It will be appreciated that this process can be used to connect constant values on nodes 264 and 266 of **Figure D3** to the input nodes of the atomic objects 250" of **Figure [L13]** <u>**L14**</u>. Note that consistent with the operation of the remove exposers and collectors process, the exposers shown in **Figure [L12]** <u>**L13**</u> are removed in **Figure [L13]** <u>**L14**</u>, and constant values A0A1A2A3 and B0B1B2B3 are applied directly to the input nodes of the atomic operators.

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Kent L. GILSON

Serial No.: 09/747,602

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SUBMISSION OF FORMAL DRAWINGS

Assistant Commissioner for Patents
Washington, D.C. 20231

Dear Sir:

Enclosed are 63 sheet(s) of formal drawings in connection with the above-identified application.

Respectfully submitted,

Dated: July 3, 2002

By: _____
Stephen C. Durant
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